

REMARKS

In a Final Office Action mailed January 30, 2007, the Examiner continued to reject the claims under 35 U.S.C. §§ 102 and 103. Applicants respond to each of the Examiner's rejections below.

The Office Action cited no new art, and the pending claims have already been considered by the Examiner *vis a vis* the same references in the anticipation and obviousness context. The remarks presented herein only point out the inaccurate characterization of the prior art references upon which the pending claims are rejected. As discussed in detail below, once the prior art references are carefully read and accurately interpreted, it will become apparent that the rejections are not appropriate. Therefore, the remarks presented herein are believed to be appropriate for consideration in after final practice. Reconsideration of the merits of this application is respectfully requested.

Rejections Under 35 U.S.C. § 102

The Examiner maintained the rejection of Claims 1-4, 6-7, 9, 42-45, 47 and 49 under 35 U.S.C. § 102 as being anticipated by US Patent No. 5,725,630 to Roberts & Volgas. With respect to Claims 1-4, 6, and 42-45, the Examiner alleged that Roberts & Volgas disclose a method of modifying a plant or plant part, such as seeds or young plants, with a composition comprising a modified lecithin (e.g., soy or hydroxylated lecithin) to change health, growth or life cycle of the plant or plant part. Applicants respectfully disagree.

Despite the Examiner's continued assertion to the contrary, Roberts & Volgas simply do not disclose lecithin or modified lecithin in an aqueous solution. In particular, Applicants reiterate that Roberts & Volgas only disclose that modified lecithin may be used as a dry carrier (i.e. inert vehicle) to absorb a liquid fertilizer for use as a dry fertilizer. *See column 3, line 20 to column 7, line 64*, in which Roberts & Volgas list agents that suffice as dry carriers ("The carrier can be, but is not limited to talc; clays such as, but not limited to silica;" Note that this sentence does not end with a period after silica, but instead a semicolon, which goes on to include lecithin, soy lecithin and hydroxylated lecithin. The period at the end of this sentence is located after "Zirconium oxide" in column 7, line 64.). Consequently, lecithin, soy lecithin and hydroxylated lecithin cannot be sprayed onto a dry carrier as suggested by the Examiner because they are the dry carrier for the liquid fertilizer. As such, Roberts & Volgas do not disclose the use of lecithin or modified lecithin in a solution.

The application of a dry carrier with fertilizer is clearly illustrated in Examples 1 and 2. In Example 1, Bayfolan (a liquid fertilizer, which does not contain lecithin or modified lecithin; *see* column 8, lines 30-35; Applicants also include the label and the MSDS for Bayfolan for the Examiner's convenience) was absorbed onto Hisel ABS (the dry carrier, which could likewise be lecithin or modified lecithin), *see* column 8, lines 36-41) to generate a dry fertilizer. Roberts & Volgas then clearly stated that seeds were placed in "the powder" and incubated for four (4) days. *See* column 8, lines 41-42. Moreover, Roberts & Volgas stated that seeds grown in liquid Bayfolan (the control to the dry fertilizer) did not produce the desired results. *See* column 8, lines 43-44. As such, Example 1 does not show application of modified lecithin in solution to seeds or young plants.

In Example 2, Asset (a liquid nutrient, which does not contain lecithin or modified lecithin; *see* column 8, lines 66-67; Applicants also include the label and the MSDS for all Asset products for the Examiner's convenience), a liquid fertilizer (which also does not contain lecithin or modified lecithin, *see* column 8, lines 64-65) and a mixture of metal chelates were absorbed onto Hisel ABS to generate a dry fertilizer. Roberts & Volgas then clearly stated that this produced a "free-flowing powder" in which seeds were placed and incubated for four (4) days. *See* column 9, lines 13-16, and lines 20-22. Like Example 1, Roberts & Volgas stated that seeds grown in liquid fertilizer (the control to the dry fertilizer) did not produce the desired results. *See* column 9, lines 20-22. As such, Example 2 does not show application of modified lecithin in solution to seeds or young plants. Therefore, Roberts & Volgas do not anticipate Claims 1-4, 6, and 42-45. In view of these remarks, Applicants respectfully request reconsideration of this rejection as applied to Claims 1-4, 6, and 42-45.

With respect to Claims 7 and 47, the Examiner alleged that Roberts & Volgas disclose treating roots and leaves of young plants with a composition comprising a modified lecithin (e.g., soy or hydroxylated lecithin). Applicants respectfully disagree. As discussed above, Roberts & Volgas do not disclose compositions comprising modified lecithin in solution. Accordingly, Roberts & Volgas do not anticipate Claims 7 and 47. In view of these remarks, Applicants respectfully request reconsideration of this rejection as applied to Claims 7 and 47.

With respect to Claims 9 and 49, the Examiner alleged that Roberts & Volgas disclose treating young plants that are not harvested (i.e. pre-harvest application) with a composition comprising a modified lecithin (e.g., soy or hydroxylated lecithin). Applicants respectfully

disagree. As discussed above, Roberts & Volgas do not disclose compositions comprising modified lecithin in solution. Thus, Roberts & Volgas do not anticipate Claims 9 and 49. In view of these remarks, Applicants respectfully request reconsideration of this rejection as applied to Claims 9 and 49.

Rejections Under 35 U.S.C. § 103

The Examiner rejected Claims 1-4, 6-8, 10-14, 48 and 50-54 under 35 U.S.C. § 103 as being obvious over Staden O, "Brown in Golden Delicious," Bulletin of the Sprenger Institute (1960's) in view of Roberts & Volgas. With respect to Claims 1-4 and 6, the Examiner alleged that even though Staden does not teach modifying a plant or plant part with a composition comprising modified lecithin, such as soy or hydroxylated lecithin, it would have been obvious to one skilled in the art after reading Roberts & Volgas. Applicants respectfully disagree.

Staden disclosed only lecithin, not modified lecithin. Moreover, although Staden disclosed dipping Golden Delicious apples in a lecithin-pimaricin solution to prevent surface browning, the solution had no overall effect on preventing browning. That is, the lecithin solution was ineffective and therefore devoid of biological activity (as also shown in the above-identified application; *see* paragraph [0039]). Specifically, Staden treated three (3) sources of Golden Delicious apples: Group A showed an increase in browning when dipped in two (2) solutions (a 1.5% lecithin solution and a 2% lecithin solution); Group B showed no statistical change in browning when dipped in the solutions; and Group C showed a slight decrease (which Staden noted was "insignificant" -- *see* third paragraph of Staden) in browning when dipped in the solutions. Given these results, Staden concluded that "lecithin-pimaricin treatment of Golden Delicious does not offer a solution for the skin discoloration phenomenon." Even the Examiner concedes that Staden is silent regarding the use of modified lecithin. As such, Applicants query how one skilled in the art would arrive at the present invention when Staden showed that lecithin had no biological effect in modifying a plant or plant part and when Staden is silent regarding the use of modified lecithin?

Roberts & Volgas, discussed in detail above, do not cure the deficiencies of Staden. In fact, Roberts & Volgas reinforce the notion that lecithins, including modified lecithins such as hydroxylated lecithin, lack biological activity. Briefly, Roberts & Volgas disclose the use of lecithin or hydroxylated lecithin as a dry carrier (i.e. inert carrier for a dry fertilizer) for a fertilizer (i.e. active ingredient of the dry fertilizer). One skilled in the art could

logically interpret this to mean that lecithin and modified lecithin lack any biological activity on their own. As such, Roberts & Volgas actually teach away from modifying Staden to use hydroxylated lecithin in a solution.

As noted in the previous response, it is well-settled law that there must be some teaching, suggestion or motivation for one of ordinary skill to combine or modify the references. Further, there must be some reasonable expectation of success to performing said combination or modification. "Both the suggestion and the expectation of success must be found in the prior art, not in applicants disclosure." *See In re Dow Chem. Co v. American Cyanamid Co.*, 837 F.2d 469, 473 (Fed. Cir. 1988). As applied to the above-identified application, nothing in Staden or Roberts & Volgas, either alone or in combination, disclose, teach or suggest to one skilled in the art to combine or modify Staden and Roberts & Volgas to modify a plant or plant part with a composition comprising modified lecithin in solution. Therefore, absent a specific suggestion in Staden or Roberts & Volgas that modified lecithin has the same activity as provided in the above-identified application, Applicants submit that Claims 1-4 and 6 cannot be considered obvious.

More importantly, nothing in Staden or Roberts & Volgas provides any reasonable expectation of success from any such modification or combination, especially since the liquid solutions of each did not produce the intended results. Even assuming for the sake of argument that it would be obvious to try using modified lecithin in a solution in place of lecithin, nothing in Staden or Roberts & Volgas, either alone or in combination, discloses or suggests that such a modification has any reasonable expectation of success for the same reasons discussed above. Staden disclosed that lecithin in solution did not produce the intended result, and Roberts & Volgas disclosed that modified lecithin may be used as a dry, inert carrier for fertilizer. Even assuming that the Examiner was correct in that Roberts & Volgas used modified lecithin in solution, one skilled in the art would be further discouraged from treating plant parts with modified lecithin in solution because their solution did not produce the intended result. In view of these remarks, Applicants respectfully request reconsideration of this rejection as applied to Claims 1-4 and 6.

With respect to Claims 7-8 and 48, the Examiner alleged that Staden in view of Roberts & Volgas teaches a method of treating a fruit. Applicants respectfully disagree and reiterate the remarks made above. Given the remarks above, Staden in combination with Roberts & Volgas do not teach or suggest to the skilled artisan to treat a fruit with modified lecithin in solution, especially in view of Staden's complete lack of success in preventing

browning in Golden Delicious apples with a solution of lecithin. Likewise, Applicants query how Claim 48 is rejected when Claim 42, from which Claim 48 depends, is not rejected under § 103? In view of these remarks, Applicants respectfully request reconsideration of this rejection as applied to Claims 7-8 and 48.

With respect to Claims 10 and 50, the Examiner alleged that Staden in view of Roberts & Volgas teaches a method of post-harvest treatment of a plant part. Applicants respectfully disagree and reiterate the remarks made above. Given the remarks above, Staden in combination with Roberts & Volgas do not teach or suggest to the skilled artisan to treat a plant part with modified lecithin in solution, especially in view of Staden's complete lack of success in preventing browning in Golden Delicious apples with a solution of lecithin. Likewise, Applicants query how Claim 50 is rejected when Claim 42, from which Claim 50 depends, is not rejected under § 103? In view of these remarks, Applicants respectfully request reconsideration of this rejection as applied to Claims 10 and 50.

With respect to Claims 11 and 51, the Examiner alleged that Staden in view of Roberts & Volgas teach dipping a plant or plant part. Applicants respectfully disagree and reiterate the remarks made above. Given the remarks above, Staden in combination with Roberts & Volgas do not teach or suggest to the skilled artisan to treat a plant part with modified lecithin in solution, especially in view of Staden's complete lack of success in preventing browning in Golden Delicious apples by dipping the apples in a solution of lecithin. Likewise, Applicants query how Claim 51 is rejected when Claim 42, from which Claim 51 depends, is not rejected under § 103? In view of these remarks, Applicants respectfully request reconsideration of this rejection as applied to Claims 11 and 51.

With respect to Claims 12-14 and 52-54, the Examiner alleged that even though both Staden and Roberts & Volgas do not teach modified lecithin concentrations between about 1 ppm to about 20,000 ppm, or between about 10 ppm to about 10,000 ppm, or between about 25 ppm to about 5,000 ppm, it would have been obvious to one skilled in the art because such concentrations involve only routine skill. Applicants respectfully disagree and reiterate the remarks made above. Given the remarks above, Staden in combination with Roberts & Volgas do not teach or suggest to the skilled artisan to treat a plant part with such concentrations of modified lecithin in solution, especially in view of Staden's complete lack of success in preventing browning in Golden Delicious apples with solutions have 1.5% or 2.0% lecithin. Likewise, Applicants query how Claims 52-54 are rejected when Claim 42, from which Claims 52-54 depend, is not rejected under § 103? In view of these remarks,

Applicants respectfully request reconsideration of this rejection as applied to Claims 12-14 and 52-54.

In addition, the Examiner rejected Claims 5 and 46 under 35 U.S.C. § 103 as being obvious over Staden or Roberts & Volgas. Specifically, the Examiner alleged that even though Staden or Roberts & Volgas fail to teach acetylated lecithin, it would have been obvious to one skilled in the art given the general level of skill in the art. Applicants respectfully disagree and reiterate the remarks made above. Given the remarks above, neither Staden nor Roberts & Volgas teaches or suggests to the skilled artisan to treat a plant part with acetylated lecithin, especially in view of Staden's complete lack of success in preventing browning in Golden Delicious apples with a solution of lecithin. Also, and as noted in the previous response, minor modifications (such as acetylation) to chemical compounds can have dramatic effects on the biological activity of the compound. As is clearly stated in the above-identified application, unmodified lecithin does not have the same biological activity in plants as modified lecithin (*see paragraph [0039]*). Therefore, absent a specific suggestion in Staden or Roberts that modified (acetylated) lecithin has the same activity as lecithin, Applicants submit that the present claims cannot be considered obvious. Likewise, Applicants query how Claims 46 is rejected when Claim 42, from which Claim 46 depends, is not rejected under § 103? In view of these remarks, Applicants respectfully request reconsideration of this rejection as applied to Claims 5 and 46.

Furthermore, the Examiner rejected Claims 12-14 and 52-54 under 35 U.S.C. § 103 as being obvious over Roberts & Volgas. Specifically, the Examiner alleged that even though Roberts & Volgas do not teach modified lecithin concentrations between about 1 ppm to about 20,000 ppm, or between about 10 ppm to about 10,000 ppm, or between about 25 ppm to about 5,000 ppm, it would have been obvious to one skilled in the art because such concentrations involve only routine skill. Applicants respectfully disagree and reiterate the remarks made above. Given the remarks above, Roberts & Volgas do not teach or suggest to one skilled in the art to treat a plant part with such concentrations of modified lecithin in solution, especially in view of Robert & Volgas' use of modified lecithin as a dry carrier, in which its concentration is immaterial because the active ingredient is the fertilizer. Applicants submit that the present claims cannot be considered obvious. Again, Applicants query how Claims 52-54 are rejected when Claim 42, from which Claims 52-54 depend, is not rejected under § 103? In view of these remarks, Applicants respectfully request reconsideration of this rejection as applied to Claims 12-14 and 52-54.

Fees

No fee is believed due in connection with this submission. However, if a fee is due, in this or any subsequent response, please charge the fee to Deposit Account No. 17-0055. Likewise, no extension of time is believed due, but should any extension be required in this or any subsequent response, please consider this to be a petition for the appropriate extension of time and a request to charge the petition fee due to the same Deposit Account.

Respectfully submitted,

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